

INTERNATIONAL SEARCH REPORT

International Application No

PCT/2004/051867

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H03H9/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H03H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03/043188 A (AIGNER ROBERT ; NIKLAS ALFRED (DE); EHRLER GUENTER (DE); ELBRECHT LUED) 22 May 2003 (2003-05-22) figure 1 page 4, lines 24-27 page 5, lines 21-28 page 6, lines 24-26 page 7, lines 15-23 -----	1-12
X	US 2001/048352 A1 (HERMANN WILHELM GEORG ET AL) 6 December 2001 (2001-12-06) figures 1,3 last sentence, paragraph 47 paragraph '0059! sentence 1, paragraph 60 sentence 1, paragraph 65 sentence 1, paragraph 70 sentence 2, paragraph 71 ----- -/--	1,2,5,8, 10,12

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

17 January 2005

Date of mailing of the international search report

24/01/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Plathner, B-D

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2004/051867

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 963 000 A (NOKIA MOBILE PHONES LTD) 8 December 1999 (1999-12-08) figure 16 sentence 5, paragraph 39 paragraph '0040! -----	1,2,5-8, 10,12
X	EP 1 170 862 A (MURATA MANUFACTURING CO) 9 January 2002 (2002-01-09) paragraph '0046! paragraphs '0050!, '0051! paragraph '0080! figures 3,4 -----	1,2, 5-10,12
A	WO 02/093740 A (UBE ELECTRONICS LTD ; NAGAO KEIGO (JP); YAMADA TETSUO (JP); HASHIMOTO) 21 November 2002 (2002-11-21) -----	1-12
A	& US 2004/135144 A1 (NAGAO KEIGO ET AL) 15 July 2004 (2004-07-15) figures 1,2 abstract -----	1-12

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/051867

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03043188	A	22-05-2003	DE 10155927 A1 WO 03043188 A1	05-06-2003 22-05-2003
US 2001048352	A1	06-12-2001	CN 1383609 T WO 0178230 A1 EP 1290790 A1 JP 2003530705 T	04-12-2002 18-10-2001 12-03-2003 14-10-2003
EP 0963000	A	08-12-1999	FI 981245 A FI 981415 A CN 1237827 A ,B CN 1237828 A ,B EP 0962999 A2 EP 0963000 A2 JP 2000030594 A JP 2000030595 A US 6204737 B1 US 6242843 B1	03-12-1999 03-12-1999 08-12-1999 08-12-1999 08-12-1999 08-12-1999 28-01-2000 28-01-2000 20-03-2001 05-06-2001
EP 1170862	A	09-01-2002	JP 3498682 B2 JP 2002009579 A JP 3470691 B2 JP 2002076823 A EP 1170862 A2 US 2001054941 A1 JP 2002237738 A	16-02-2004 11-01-2002 25-11-2003 15-03-2002 09-01-2002 27-12-2001 23-08-2002
WO 02093740	A	21-11-2002	JP 2002344279 A JP 2002374145 A JP 2003198319 A WO 02093740 A1 US 2004135144 A1	29-11-2002 26-12-2002 11-07-2003 21-11-2002 15-07-2004
US 2004135144	A1	15-07-2004	JP 2002344279 A JP 2002374145 A JP 2003198319 A WO 02093740 A1	29-11-2002 26-12-2002 11-07-2003 21-11-2002